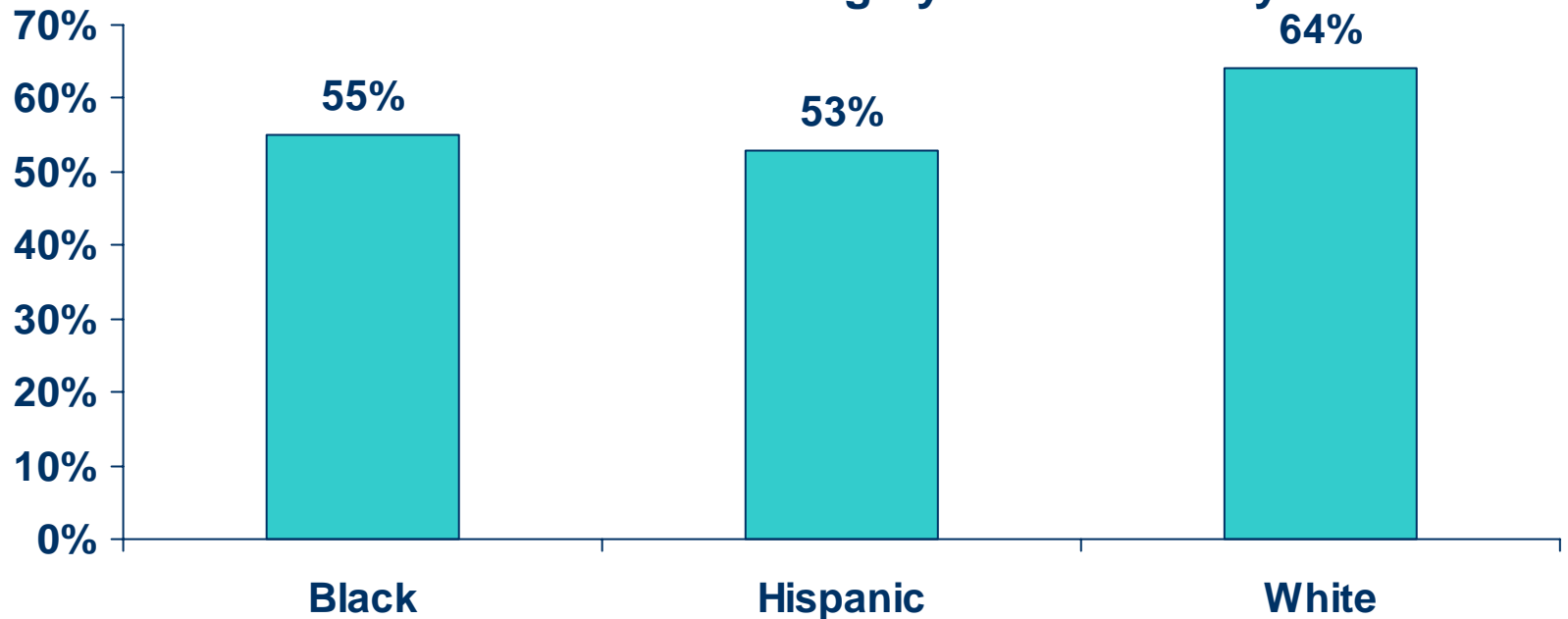


The Relationship Between State Public Policies and College Enrollment

Laura W. Perna
September 15, 2003

The Problem: Continued Stratification of Higher Education by Race/Ethnicity

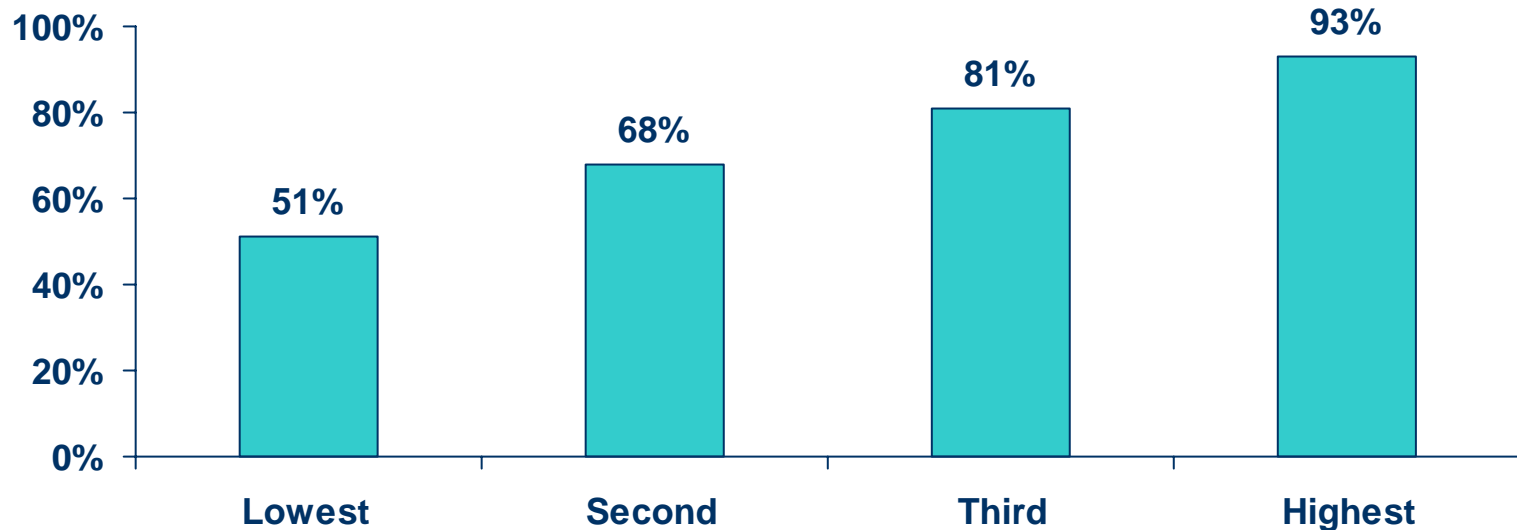
Percentage of 2001 High School Graduates Who Enrolled in College In the Fall After Graduating by Race/Ethnicity



Source: U.S. Department of Education, 2003

The Problem: Continued Stratification of Higher Education by SES

Percentage of 1992 High School Graduates Who Were Enrolled in Postsecondary Education in Fall 1992 by Socioeconomic Status Quartile



Source: Analyses of NELS: 92/94

State Government Intervention in the Higher Education Market

- Rationales:
 - Public/external benefits of higher education
 - Participants cannot use their post-higher education level of human capital as collateral
 - Individuals lack perfect information about college opportunities
 - The public supports a reduction in inequities across income and/or racial/ethnic groups

Types of State Government Interventions

- Influence the demand for higher education
 - Student financial aid
 - K-12 academic preparation
 - College savings plans
 - Pre-college outreach programs
- Influence the supply of higher education
 - State appropriations
 - Desegregation initiatives

Study 1:

Analysis of National Data

- What is the relationship between state public policies and the type of institution that high school graduates attend?
- How do college enrollment patterns of high school graduates vary by socioeconomic status after taking into account state public policies and other state characteristics?

Data

- Student-level data
 - NELS:92/94
 - 1992 High school graduates
 - n = 10,148 high school graduates in 50 states
- State-level data
 - IPEDS
 - Digest of Education Statistics
 - State Comparisons of Education Statistics
 - National Association of State Scholarship & Grant Programs
 - Current Population Survey

Dependent Variable

- Not enrolled (reference category)
- In-state public 2-year institution
- In-state public 4-year institution
- In-state private 4-year institution
- Out-of-state institution

Analyses: Multinomial HLM

Student-Level Independent Variables

- Financial resources
 - Socioeconomic status
- Human capital
 - Test scores
 - Highest level of mathematics
- Social capital
 - Parent-student discussions about education

State-Level Variables

- Direct appropriations to institutions
 - % of total appropriations to higher education
 - % of higher education appropriations to public institutions
- Tuition
 - Average tuition at public 2-year institutions
 - Tuition at public 4-year institutions: Tuition public 2-year
 - Tuition at private 4-year institutions: Tuition public 2-year
- Financial aid to students
 - Amount of need-based aid / traditional college-age student
 - % state aid to non-need based programs
 - Whether state non-need based aid available to students at private institutions

State-Level Variables (continued)

- K-12 academic preparation
 - % public K-12 education revenues from state government
 - % current expenditures for public K-12 education for instruction
 - Number math units required for high school graduation
 - Whether required to pass math test for high school graduation
 - % teachers with master's degree or higher
 - Ratio of students to teachers
 - Ratio of students to guidance counselors
 - Average annual teacher salaries
- Other state characteristics
 - % children in poverty
 - % adults with at least a bachelor's degree
 - Unemployment rate
 - Distribution of higher education institutions in the state
 - Geographic region

State-Level Predictors of Enrolling in Different Types of Institutions

(controlling for student-level variables)

Predictors	In-state 2-year Public	In-state 4-year Public	In-state 4-year Private	Out-of- State
Appropriations to higher ed.				-
Tuition 4-yr private: 2-yr public		+		
State need aid/population		+	+	
Student: Teacher (K-12)		-		-
2-year public: Private 4-year	+			
4-year public: Private 4-year	-	+		

Variations in College Enrollment Patterns by Socioeconomic Status

SES Variable	In-State Public 4-Year	In-State Private 4-year	Out-of-state
Versus In-State Public 2-year			
Low SES	-	-	-
High SES	+	+	+
Versus In-State Public 4-year			
Low SES		+	-
High SES		+	+
Versus In-State Private 4-year			
Low SES			-
High SES			+

Conclusions:

RQ1: Relationship Between State Public Policies and Enrollment

- All 4 types of state public policies are related to college enrollment patterns of high school graduates
- State public policies should be examined in terms of their effects on a state's higher education system
- State need-based aid promotes choice among different institutions
- Increasing direct appropriations may reduce "brain drain"
- College enrollment patterns mirror the composition of a state's higher education system

Conclusions:

RQ2: Variations in Enrollment by SES

- Higher education enrollment patterns are stratified by SES
- Low-SES high school graduates are less likely to enroll in any type of college or university
- Among those who enroll, low-SES high school graduates are more likely to attend in-state public 2-year colleges

Study 2: Exploratory Study of Maryland

- Research suggests that state public policies influence college enrollment patterns
- But, research describes “average” relationships, simplifying complexities
- Variations across states in:
 - State higher education policies
 - College enrollment going rates
 - Stratification of college access and choice across groups

Research Questions

- In what types of colleges do individuals of different racial/ethnic groups in the state of Maryland enroll during the 1990s?
- What state public policies and state demographic characteristics may have influenced demand for college enrollment in the state during the 1990s?
- What state public policies may have influenced the supply of higher education?

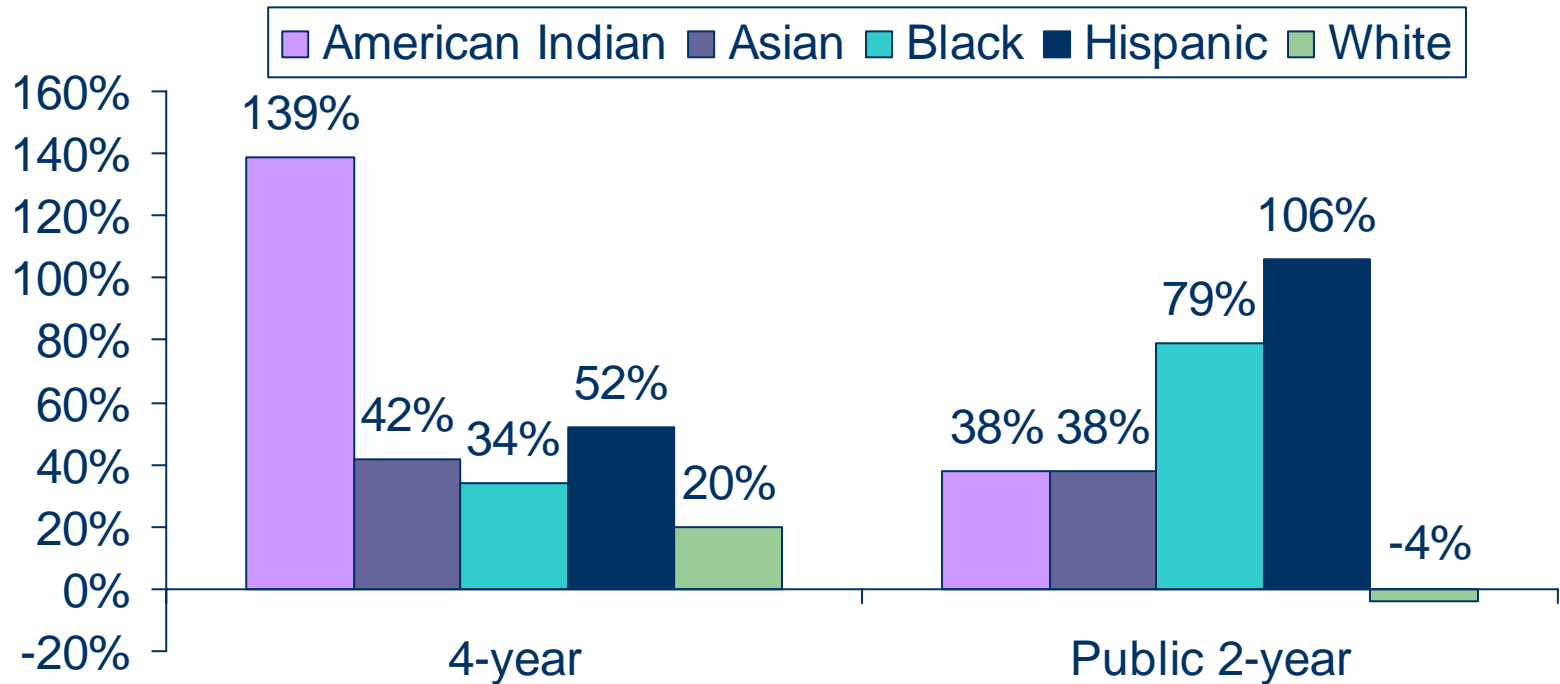
Research Method

- Descriptive analyses of published and unpublished data from multiple sources
 - Maryland Higher Education Commission
 - Maryland Department of Education
 - University System of Maryland Office
 - Maryland General Assembly
 - IPEDS (US Dept. of Education)
 - Common Core of Data (US Dept. of Education)

State Context

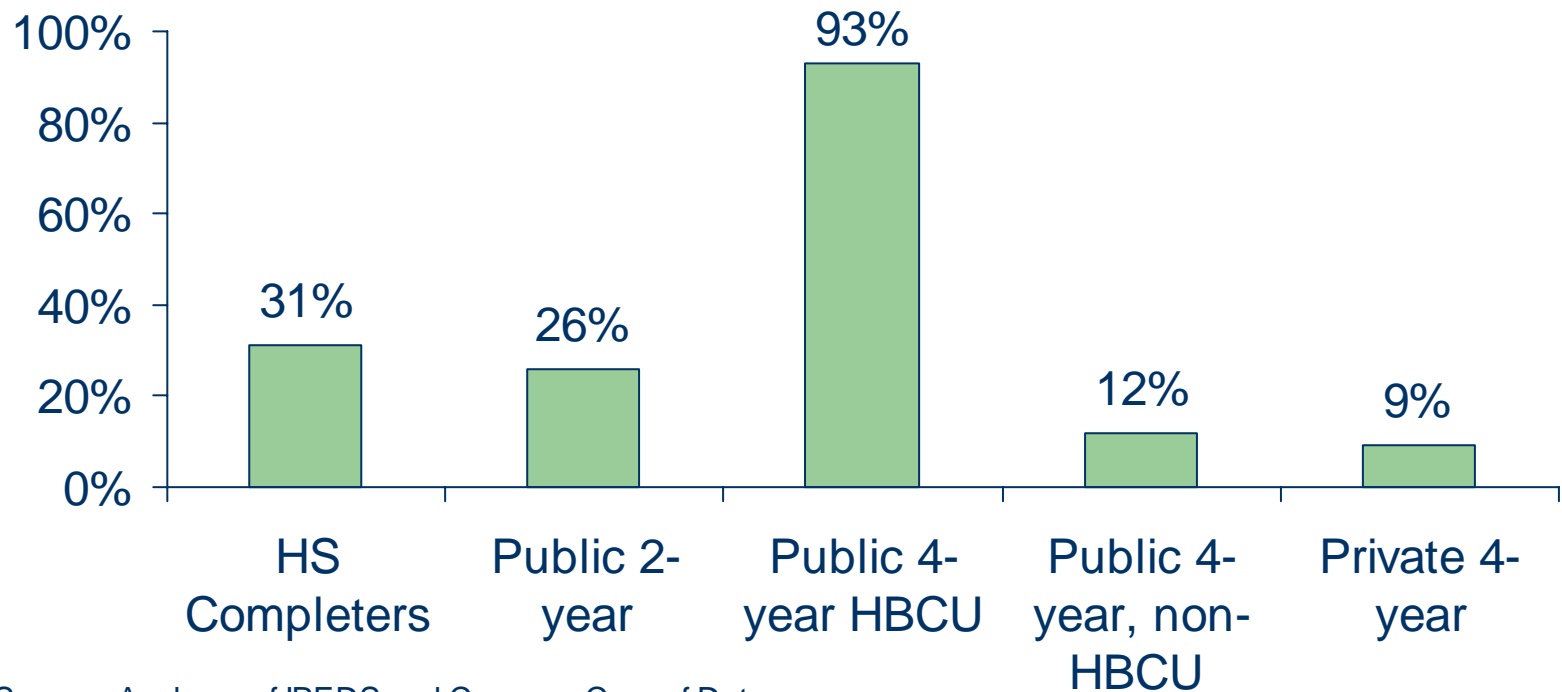
- Diverse system of higher education
 - 13 public 4-year institutions
 - 16 public 2-year institutions
 - 26 private 4-year institutions
 - 2 private 2-year institutions
- Desegregation requirements (U.S. v. Fordice, 1992)
- Stated commitment to promoting access to college for African American and low-income students

Change in First-Time, Full-Time Freshmen Enrollment at Maryland State-Supported Institutions: 1990 to 1998



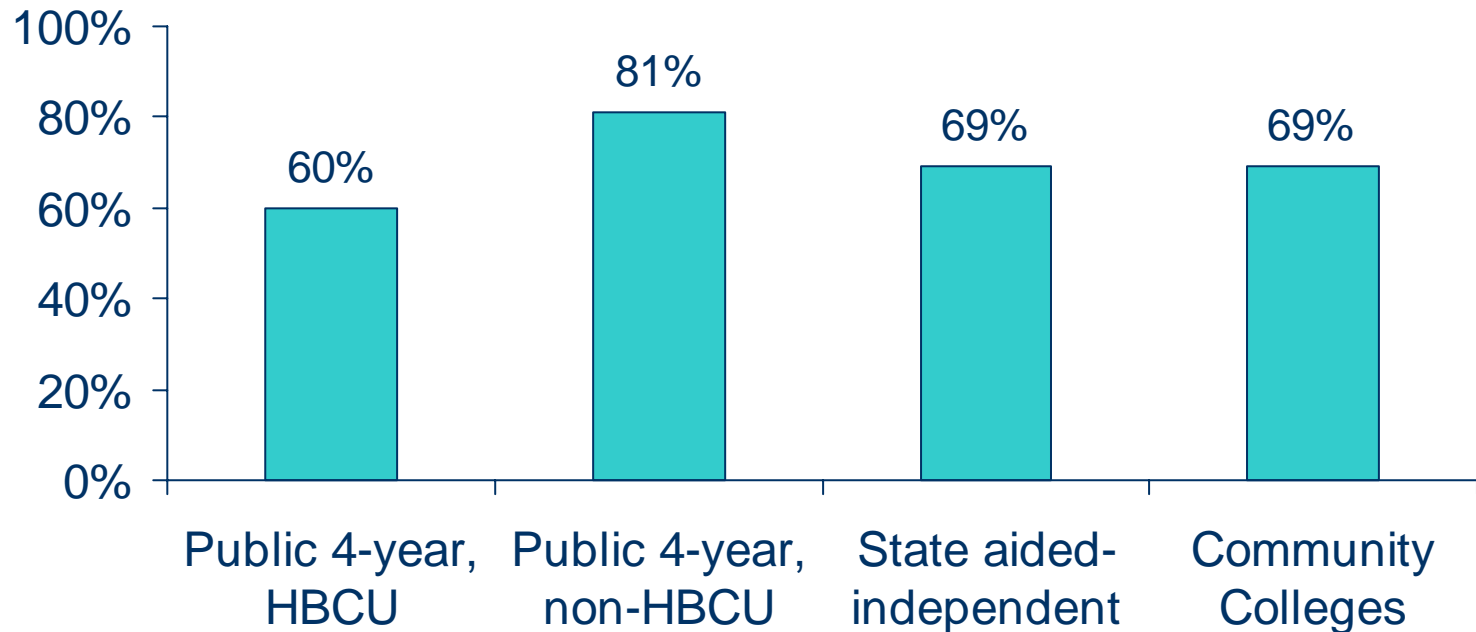
Source: Analyses of IPEDS

Representation of Blacks Among First-Time, Full-Time Freshmen Attending Maryland Institutions: Fall 1998



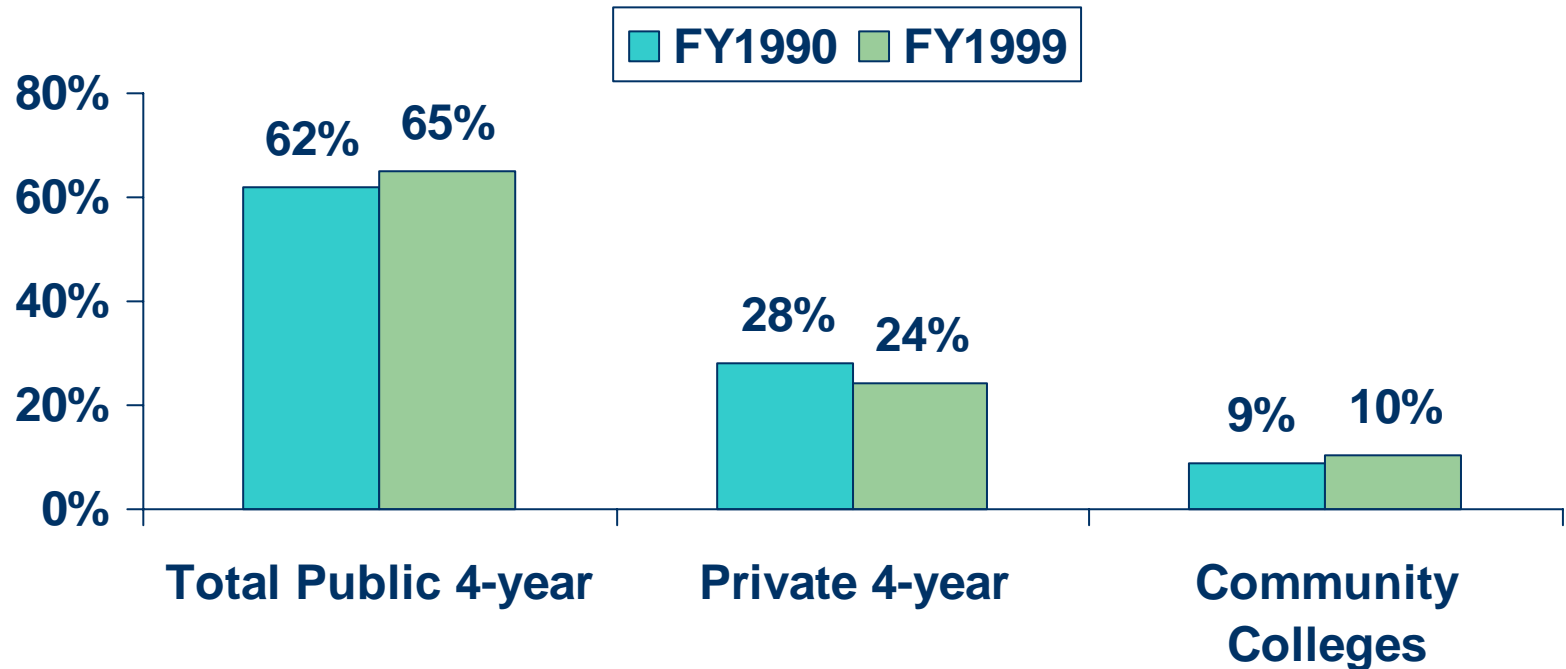
Source: Analyses of IPEDS and Common Core of Data

Increase in Average Tuition & Fees at Maryland Institutions: 1992 to 2000



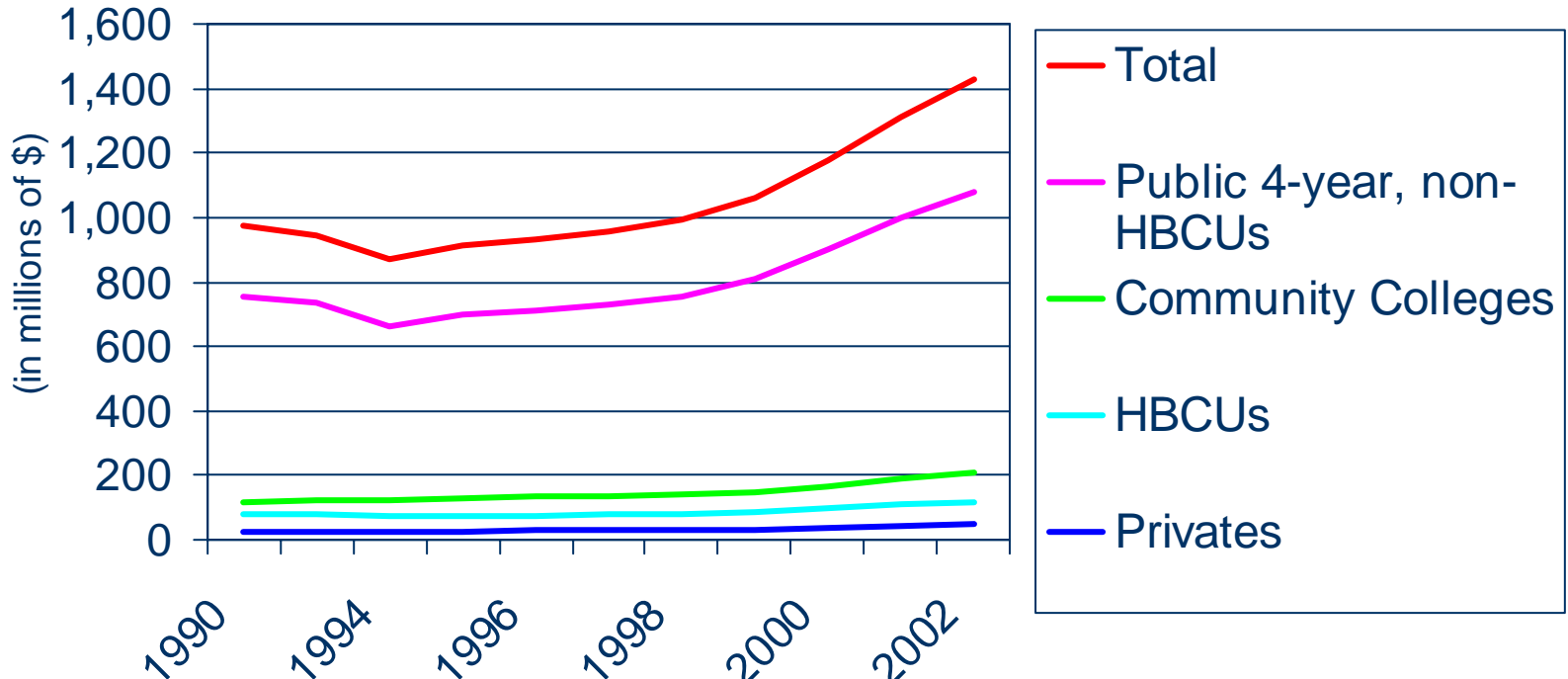
Source: MHEC, 2002

Distribution of State Financial Aid Appropriations by Institutional Type: 1990 & 1999



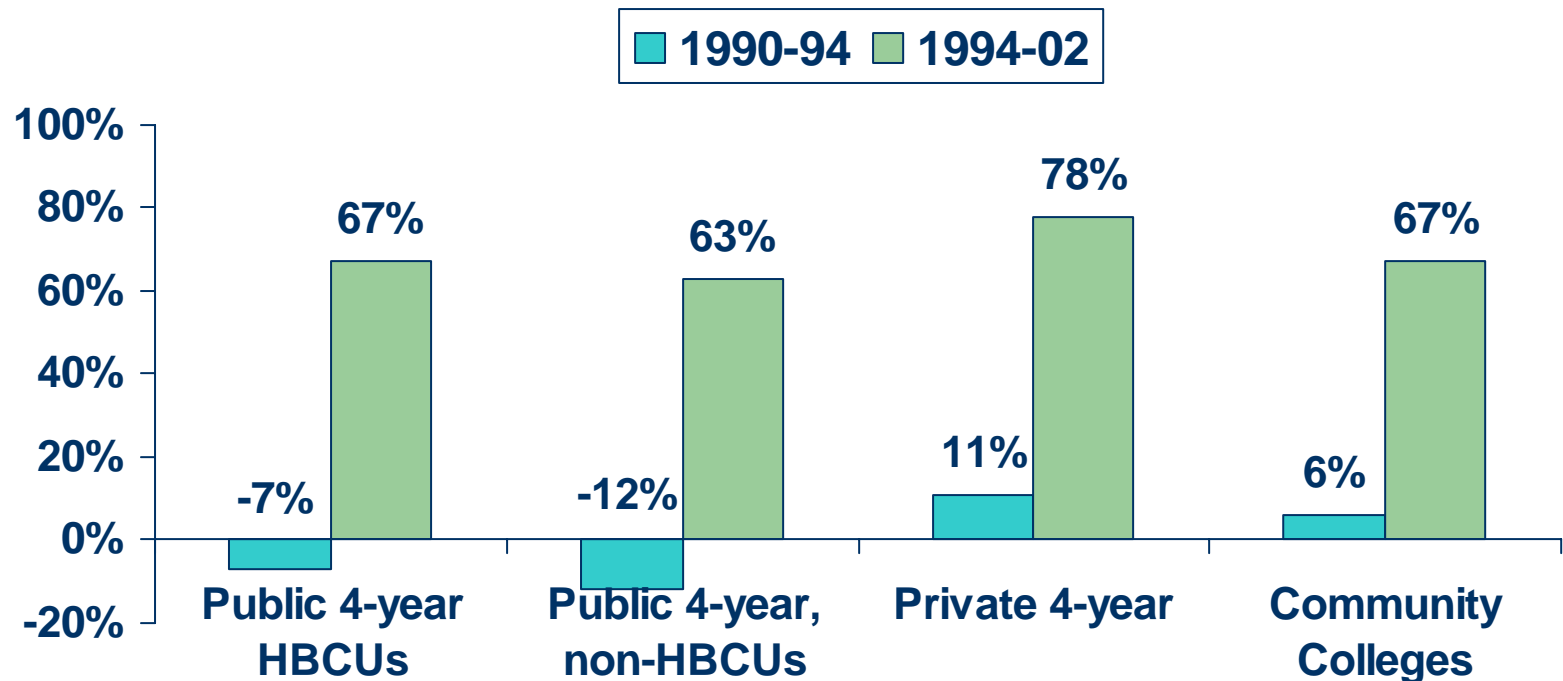
Source: MHEC (2002).

Trends in State Appropriations to Maryland Higher Education Institutions: FY1990 to FY2002



Source: University System of Maryland, Office of Administration and Finance (2003)

Percent Change in State Appropriations to Maryland Institutions: FY1990 to FY2002



Source: University System of Maryland, Office of Administration and Finance (2003)

Desegregation Initiatives

- During the 1990s, desegregation policies appeared to involve not much more than “monitoring” of public institutions’ efforts

Limitations of the Analyses

- Descriptive statistics only
- Describe one state at one point in time
- Examine state public policies only, ignoring changes in institutional and federal policies
- No attention to effects of legal and political forces
- Enrollment trends do not take into account in- and out-migration

Conclusions

- Persistence of racial/ethnic group gaps in college enrollment in the state of Maryland despite public policies intended to influence demand for and supply of higher education in the state.
- Public policies established in late 1990s and early 2000s may increase racial/ethnic group gaps in enrollment.

Current Challenges

- More rigorous high school graduation requirements

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- Reduced state appropriations
- Absence of clear commitment to need-based financial aid

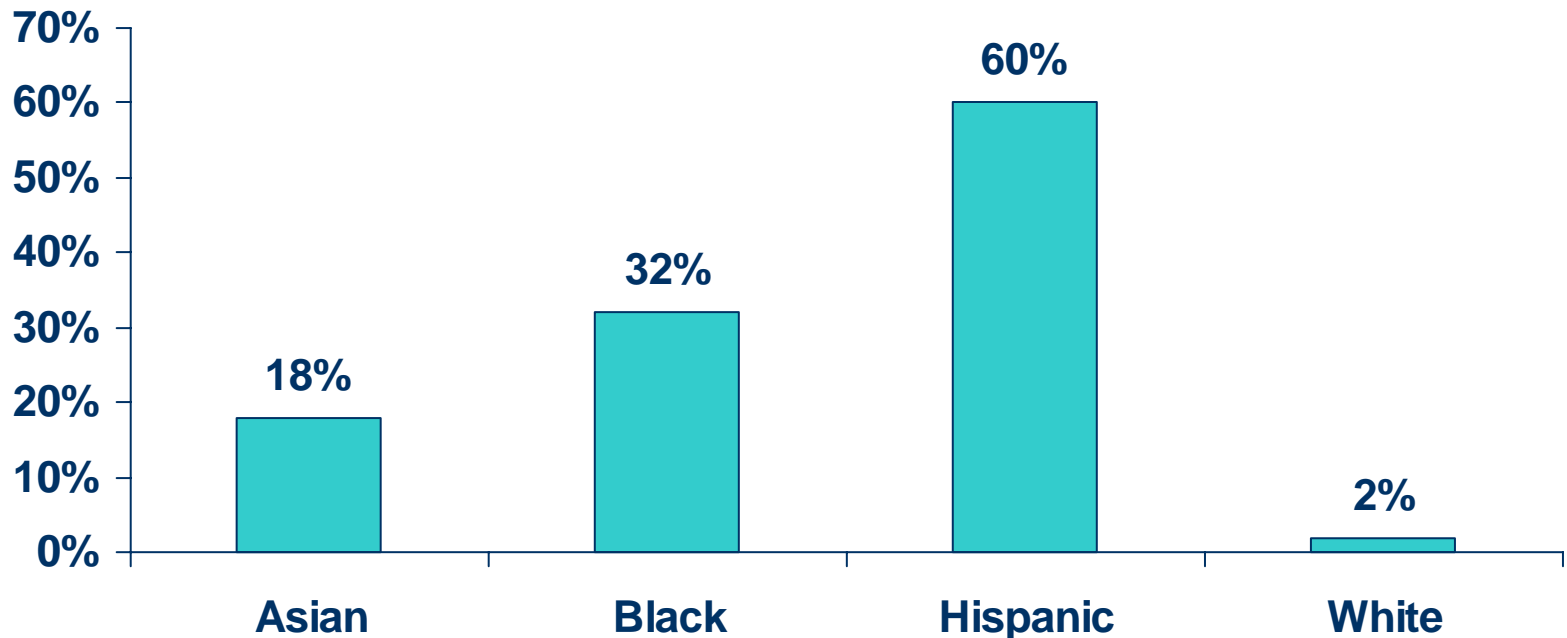
Current Challenges

- More rigorous high school graduation requirements
- Reduced state appropriations
- Absence of a focused, coordinated approach to state financial aid policy
- Insufficient supply of higher education

Comments and Questions

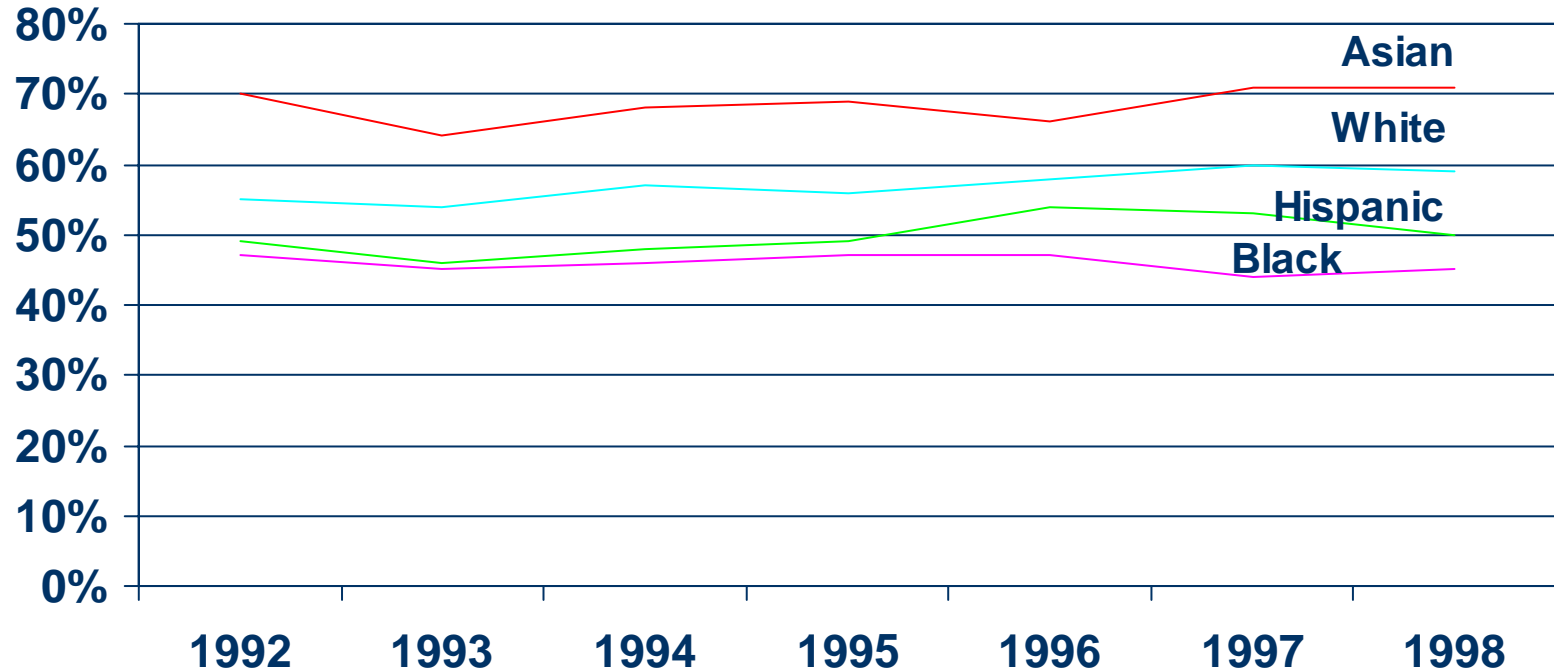


High School Completion Rates



Source: Young & Hoffman (2002) and analyses of CCD, State Public Elementary/Secondary Dropout and Completion Data File

College Participation Rates



Source: Analyses of IPEDS and Common Core of Data